ASSIGNMENT 2

Textbook Assignment: "Basic Mechanism," chapter 4, "Electrical and Electronic Circuit Analysis," chapter 5, and "Gun Mounts," chapter 6, pages 4-1 through 6-24.

2-1. What gear allows a driven gear to be turned in the same direction as the drive gear?

1. Bevel
2. Idler
3. Rack-and-pinion
4. worm

2-2. What gear allows for a change in angular direction in a gear train?

1. Bevel
2. Idler
3. Rack-and-pinion
4. worm

2-3. What gear is used in cases where linear motion is desired?

1. Bevel
2. Idler
3. Rack-and-pinion
4. Worm

2-4. A vernier coupling serves what function on gun mounts?

1. Transmits motion only
2. Corrects for a misaligned shaft
3. Fine adjustment
4. Increases shaft speed

2-5. In a hydraulic system most malfunctions result from which of the following causes?

1. Contamination
2. Filters
3. Solenoids
4. Valves

2-6. What device triggers an indication to the system operator that the filter is clogged?

1. Automatic shut-down switch
2. Bypass value
3. Equipment slow
4. FCS

2-7. What type of hydraulic power drive in ordnance equipment is the most used?

1. Accumulator
2. Axial piston pump
3. Manual pump
4. Rotary pump

2-8. What is the main purpose of a CAB type power drive?

1. To boost hydraulic pressure
2. To produce a mechanical output
3. To provide hydraulic fluid output
4. To regulate hydraulic pressure

2-9. What is the operational speed of a CAB type power drive?

1. Low
2. Medium
3. High
4. Variable

2-10. The tilt plate in a CAB unit is able to rotate a maximum of 40 degrees.

1. True
2. False

2-11. On a CAB unit, what device connects the A-end to the B-end, both physically and hydraulically?

1. Rotating cylinder
2. Stroking piston
3. Tilt plate
4. Valve plate

2-12. CAB unit B-end direction of rotation is determined by which of the following actions?

1. Electric motor rpms
2. Speed of the stroking pistons
3. Direction of tilt applied to the tilt plate
4. Varying hydraulic psi to the stroking pistons

2-13. In a gun mount hydraulic system, servo and supercharge fluids are provided by what device?

1. Dual gear pump assembly
2. Rotating cylinder
3. Tilt plate
4. Valve plate

2-14. In a gun mount or GMLS, what hydraulic component is servo fluid distributed?

1. Ammunition handling
2. CAB unit
3. RSR
4. Power drive

2-15. What hydraulic system is supercharge fluid distributed?

1. Ammunition handling
2. CAB unit
3. RSR
4. Power drive

2-16. On a launcher of a gun mount with a CAB type of power drive, what device, if any, secures against the roll and pitch of the ship when the power is off?

1. CAB unit
2. Power-off brake
3. Manual securing pins
4. None

2-17. On the Mk 75 gun mount, the hydraulic system provides hydraulic pressure for operation of the ammunition-handling system and what other component?

1. Cold recoil jacks
2. Revolving magazine
3. Rocking arm assemblies
4. Screw feeder

2-18. On the Mk 75 gun mount, ammunition in the revolving magazine moves in what direction?

1. From the inner circle to the outer circle
2. From the inner circle to the rocking arms
3. From the outer circle to the inner circle
4. From the outer circle to the rocking arms

2-19. On the Mk 75 gun mount rocking arms, ammunition in transit between the screw feeder and the loader drum is held in place by what devices?

1. Hydraulically operated clamps only
2. Mechanically operated clamps only
3. Hydraulically and mechanically operated clamps only
4. Holding pawls

2-20. On the Mk 75 gun mount, the empty case tray is attached to what component?

1. Gun barrel
2. Loader drum
3. Rocking arms
4. Transfer tray frame

2-21. As the transfer tray moves to the DOWN position (in counterrecoil) and the rammer assembly extends, what function(s) is/are performed on the Mk 75 gun mount?

1. A round is rammed in the gun barrel
2. The ejected spent case of the previously fired round is pushed out of the empty case tray into the empty case ejector chute
3. Both 1 and 2 above
4. The breech mechanism is held open during counterrecoil

2-22. The equilibrator and compensator assemblies on the Mk 75 gun mount operate together primarily for what function?

1. Counterbalance
2. Cycling ammunition
3. Misfire operations
4. Remote firing

2-23. The recuperator on the Mk 75 gun mount operates using what type of power?

1. Hydraulic
2. Hydropneumatic
3. Manual
4. Pneumatic

2-24. On the Mk 75 gun mount, what component moves the gun to the hooks position in preparation for firing?

1. Cold recoil jacks
2. Compensator
3. Equilibrator
4. Recuperator

2-25. On the Mk 45 gun mount, the fuze setter operates using what type of power?

1. Electrical
2. Electrohydraulic
3. Hydropneumatic
4. Pneumatic

2-26. What component on the Mk 45 gun mount requires the lower and upper accumulator system to be lit-off to complete its cycle?

1. Cradle
2. Fuze setter
3. Lower hoist
4. Upper hoist

2-27. What is the primary use of HP air in gun systems?

1. Elevation drive
2. Gas ejection system
3. Door seals
4. Train drive

2-28. How are Hall-effect switches actuated?

1. Electrically
2. Hydraulically
3. Magnetically
4. Manually

2-29. Where are optical switches located on the Mk 45 Mod 1 gun mount?

1. Cradle
2. Gas ejection system
3. Hoist
4. Rammer

2-30. What operation of a relay is determined by the time between the closing of the coil circuit and the closing of the relay contacts?

1. Acceleration
2. Distance
3. Speed
4. Weight

2-31. Solenoids convert electrical inputs from control circuits into which of the following outputs?

1. Electrical
2. Hydraulic
3. Mechanical
4. Pneumatic

2-32. The electrical component SIR1 is part of what system on the Mk 45 gun mount?

1. Breech
2. Hoist
3. Loader
4. Rammer

2-33. What information is indicated by the numbers within the gates on a typical logic control circuit?

1. Control panel where the circuit is located
2. Part number of the circuit board
3. Printed circuit board in the EP2 panel on which the circuit is located
4. Voltage of the circuit

2-34. What information is indicated by the numbers on the input and output lines of the gates of a typical logic control circuit?

1. Control panel where the circuit is located
2. Part number of the circuit board
3. Circuit board on which the circuit is located
4. Terminal pin that connects to that point

2-35. What type of synchro is used to position a dial or valve?

1. Control transformer
2. Control transmitter
3. Torque receiver
4. Torque transmitter

2-36. How can a differential synchro be identified?

1. By color code
2. By two rotor leads
3. By three rotor leads
4. By one stator lead

2-37 By changing the synchro receiver lead S2 with S1 or S3, what degree error would result?

1. 90°
2. 120°
3. 180°
4. 270°

2-38 What is the reference point for alignment of all synchro units?

1. Electrical zero
2. Ships centerline
3. System director
4. Tram readings

2-39. What short circuit would cause all receiver dials to stop at 60 degrees or 240 degrees in a properly zeroed TX-TR synchro system?

1. A short from R1 to R2
2. A short from R1 to R3
3. A short from S1 to S2
4. A short from S2 to S3

2-40. What is the function of the Mk 75 gun mount barrel cooling panel?

1. Controls the flow of cool air to the barrel
2. Controls the flow of salt water to flush the gun barrel only
3. Controls the flow of fresh water to cool the gun barrel only
4. Control the flow of fresh and salt water to cool and flush the gun barrel

2-41. The Mk 75 gun mount anti-icing system consist of what total number of heating elements?

1. One for train and six for elevation
2. Three for train and four for elevation
3. Five for train and two for elevation
4. Six for train and one for elevation

2-42. What assembly on the Mk 75 gun mount allows for unlimited training of the mount?

1. Hydraulic motor
2. Power drive
3. Rotary junction box
4. Slip ring

2-43. On the Mk 75 gun mount, what device holds the brake in place when no power is applied to the electric train motor (No. 1)?

1. Air manifold
2. Hydraulic valve
3. Manual hand crank
4. Steel springs

2-44. What device or action releases the train brake when power is applied to the Mk 75 gun mount train system?

1. Air pressure
2. Electromagnet
3. Hydraulic pressure
4. Manual hand crank

2-45. On the Mk 75 gun mount, the three control transformer (CTS) synchros in the train synchro control box are used in what manner?

1. All three are for coarse control
2. All three are for fine control
3. One CT (1X) is for coarse control, one CT (36x) is for fine control, and one CT is a spare
4. One CT (1X) is for fine control and two CTS (36X) are for coarse control

2-46. On the Mk 75 gun mount, of the 10 cams and 10 cam-actuated microswitches in the camstack assembly, which one is the spare?

1. No. 1
2. No. 7
3. No. 3
4. No. 9

2-47. What component, located in the Mk 75 gun mount GCP, supplies power to operate the train and elevation motors?

1. Electronic supply transformer 1J1-T1
2. Main transformer T1
3. Silicon-controlled rectifiers (SCRS)
4. Tilt-angle potentiometer

2-48. The train and elevation systems on Mk 75 gun mount each use 12 silicon-controlled rectifiers (SCRS) to control the drive motors in which of the following actions?

1. Rotation
2. Speed only
3. Direction only
4. Speed and direction

2-49. Which of the following panels on the Mk 45 gun mount contains the electrical power-distribution and power-converting components of the gun mount control system?

1. EP1
2. EP2
3. EP3
4. EP4

2-50. What input on the Mk 13 Mod 4 GMLS Auto-Not-Unload circuit ensures that the launcher rail does not retract during a jettisoning operation unless the guide arm is loaded?

1. KPX4-1
2. SIA1-1
3. SIL1-2
4. SIR1-1

2-51. What input on the Mk 13 Mod 4 GMLS Auto-Not-Unload circuit ensures a Harpoon missile has been disarmed and is safe to jettison?

1. KPX4-1
2. PC67-K9B-1
3. SIL1-2
4. SIR1-1

2-52. What type of breechblock is used on the Mk 45 and Mk 75 gun mounts?

1. Interrupted tread
2. Horizonal sliding wedge
3. Plug
4. Vertical sliding wedge

2-53. The Mk 45 gun mount safety link performs which of the following actions?

1. Attaches the housing to the slide to prevent it from moving if counterrecoil pressure is lost
2. Prevents the gun from firing
3. Prevents personnel from entering the gun pocket
4. Blocks main motor start circuits

2-54. What position on the Mk 45 gun mount aligns a round of ammunition with the fuze setter?

1. Lower hoist
2. Transfer station
3. Upper hoist
4. Upper loading station

2-55. On the Mk 45 gun mount, the breechblock is in what position when open?

1. Down
2. Port
3. Starboard
4. up

2-56. What type of firing system is used on the Mk 75 gun mount?

1. 5 VAC
2. 10 VAC
3. 20 VDC
4. Percussion

2-57. When is a Mk 45 gun mount in a hot gun situation?

1. After 50 rounds have been fired in 4 hours or less
2. After 40 rounds have been fired in 6 hours or more
3. After 25 rounds have been fired in 7 hours or less
4. After the first round fired

2-58. What NAVSEA publication contains flow charts for misfire procedures?

1. SW200-AB-FAS-010
2. SW225-BC-SAF-010
3. SW300-BC-SAF-010
4. SW300-CB-SAF-010

2-59. On the Mk 45 or Mk 75 gun mount, internal water cooling can only be started after which of the following situations has been met?

1. The gun mount is on a safe firing bearing
2. The gun mount crew has evacuated
3. The projectile and powder charge has been removed
4. The powder/propelling charge has been removed